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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,091	01/20/2004	Scott Kirkpatrick	27118	6931

7590 12/22/2004

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EXAMINER
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HUA, LY

ART UNIT	PAPER NUMBER
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2135

DATE MAILED: 12/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicati n No.

10/759,091

Applicant(s)

KIRKPATRICK ET AL.

Examiner

Ly V. Hua

Art Unit

2135

-- The MAILING DATE of this communication appears on the cov r sh et with th correspond nce address --

**Peri d for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

**DETAILED ACTION**

1. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3, 4, 5 and 6 (and thus claims 6-9 which depend on claim 6) are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. With regard to claim 3:

- a. Claim 3 claims:

- i. 3. The method of claim 2, wherein said at least one cryptographic primitive is used to encrypt a message according to a one-way function. It is not clear as to how it is that the using of the cryptographic primitive to encrypt a message is related to the steps of the method recited in claims 1 and 2 since no encrypted message is being generated and being used by the method.

5. With regard to claims 4 and 5:

- a. These Claims 4 and 6 claim:

- i. 4. The method of claim 2, wherein a one-time pad comprises said at least one cryptographic primitive.
- ii. 5. The method of claim 2, wherein a near-zero knowledge function comprises said at least one cryptographic primitive.

- b. These claims do not further limit the limitation of their parent claim 2:

- i. Notice that:

- (1) Claim 4 puts limitation on "a one-time pad" which has not been recited in parent claim 2 or in grandparent claim 1.

- (a) The problem here is that it is not clear as to what is to do with the "one time pad."

- (2) Claim 5 puts limitation on "a near-zero knowledge function" which has not been recited in parent claim 2 or in grandparent claim 1.

- (a) The problem here is that it is not clear as to what is to do with the "near-zero knowledge function."

6. With regard to claim 6:

- i. The phrase "said ... cryptographic primitive comprises recognizing an image" appears to be confusing in that it is not clear how it is possible that the cryptographic primitive, being an object that is imprinted on the user, be a action of recognizing an image. The examiner presents that an object can act on or be acted on by an operation, but it cannot be an operation.

7. With regard to claims 7-9:

- a. These claim depend on claim 6 and thus inherit the problem of indefiniteness from claim 6.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:  
A person shall be entitled to a patent unless –
  - (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
9. Claims 1, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Blonder (5,559,961).

<p>10. Claim 1. A method</p> <p>a. for providing</p> <p>i a security function</p> <p>ii with a user,</p> <p>b. comprising:</p> <p>i imprinting</p> <p>(1) the user</p> <p>(2) with at least one cryptographic primitive</p> <p>(3) determined from a sensory mechanism, and</p> <p>ii at least one of authorizing, identifying or authenticating</p> <p>(1) the user</p> <p>(2) according to an ability to recall said at least one cryptographic primitive.</p>	<p>11. Claim 10. A method</p> <p>a. for authenticating, authorizing or identifying a user,</p> <p>b. comprising:</p> <p>i training</p> <p>(1) the user</p> <p>(2) with information</p> <p>(3) through a sensory mechanism, and</p> <p>ii determining</p> <p>(1) accurate recall of said information</p> <p>(2) to authenticate, authorize or identify the user.</p>	<p>12. Claim 11. A method</p> <p>a. for a one-way function</p> <p>b. for authenticating, authorizing or identifying a user,</p> <p>c. comprising:</p> <p>i imprinting</p> <p>(1) the user</p> <p>(2) with a cryptographic primitive; and</p> <p>ii testing</p> <p>(1) said imprinting</p> <p>(2) with at least a similar or identical cryptographic primitive</p> <p>(a) to authenticate, authorize or identify the user.</p>	<p>13. As to claims 1, 10 and 11:</p> <p>a. Blonder (5,559,961) teaches [Figures 1, 2 and 5] a method</p> <p>i for providing a security function with a user – (providing steps 202 enabled and thus a user is to have been imprinted with certain image information),</p> <p>ii for authenticating, authorizing or identifying the user,</p> <p>iii comprising:</p> <p>(1) imprinting/training – (memorizing {impressing in a mind} certain aspect of the image such as the one shown in Figures 5, information/cryptographic-primitive/graphical-password in the user's biological memory)</p> <p>(a) the user</p> <p>(b) with information/cryptographic-primitive – (graphical representation coded with security information)</p> <p>(c) through/(determined from) a sensory mechanism – (the user's sensory mechanism being that the user's memory/brain is more sensitive to images to remember and to select {col. 2, lines 12-14}); and</p> <p>(2) to authenticate, authorize or identify – (as for which the information/cryptographic-primitive/graphical-password is imprinted in the memory in the user's biological memory)</p> <p>(a) the user</p> <p>(b) by determining/testing – (using step 219)</p> <p>(i) the user's accurate recall of the information/cryptographic-primitive/graphical-password – (the recollection of which is input via entry device 14),</p> <p>(ii) which determining is made by testing the user's recollection of the information/cryptographic-primitive/graphical-password with at least a similar/identical information/cryptographic primitive/graphical-password – (i.e., comparing the recalled information/cryptographic primitive/password with stored information/cryptographic primitive/password).</p>
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14. Claims 2, 6, 12, 13 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Blonder (5,559,961).

15. With regard to Claim 2:

- a. Claim 2 claims:
  - i 2. The method of claim 1, wherein said imprinting comprises implicit learning by the user.
- b. The user of Blonder inherently learns about the image 14 and is imprinted with certain aspect about the image in order to memorize and be able to recall certain aspect about that image..
- c. The following notes are presented for applicant's information:
  - i A user's implicit learning with a cryptographic primitive determined from a sensory mechanism, (which mechanism according to claim 6 is vision mechanism allowing a user to recognize an image), is a human biological function and thus cannot be claimed by the applicant.
  - ii The "learning by the user" is not of applicant's invention and thus cannot be a patentable limitation.
  - iii The applicant is to avoid claim human's biological learning function.

16. As to claim 6:

- a. Claim 6 claims:
  - i 6. The method of claim 2, wherein said sensory mechanism comprises vision, such that said at least one cryptographic primitive comprises recognizing an image.
- b. The sensory mechanism (being human's intrinsic biological mechanism) for recognizing images cannot be claimed as inventor's invention.
- c. In imprinting the image zones of the image screen 14 of Blonder, it is inherent that a user usage sensory mechanism.
- d. The following notes are presented for applicant's information:
  - i This limitation of claim 6 thus is not a patentable limitation as be a biological sensory mechanism that is intrinsic to a human being.
  - ii The applicant is to avoid claiming human's biological mechanism.

17. As to claims 12 and 13:

- a. These claims claim:
  - i 12. The method of claim 11, wherein said cryptographic primitive is derived from input according to a sensory mechanism.
  - ii 13. The method of claim 12, wherein said input comprises at least one image [e.g., 40 having image elements 401] and said sensory mechanism is visual -(the user's viewing of the image portions of image 400 is of visual).
- b. Blonder teaches:
  - i In his method, the cryptographic primitive (the source from which his secure information is derived) is derived from input (a mind/brain's control an action to select certain zone images) according to a sensory mechanism;
  - ii in his method, the said input comprises at least one image [e.g., 40 having image elements 401] and said sensory mechanism is visual -(the user's viewing of the image portions of image 400 is of visual).

18. As to claim 16:

- a. Blonder teaches the limitation of Claim 16 as claimed, in that his testing comprises
  - i determining whether the user is capable of

## (1) discriminating between

- (a) an imprinted cryptographic primitive -- (e.g., section 1 (the ears), section 2 (the nick), section 3 (the nose)) and
- (b) a non-imprinted cryptographic primitive -- (e.g., the cheek, the eyes)
- (2) (and thus able to select the imprinted cryptographic primitive {the sources/portions which is imprinted/impressed in the user's mind and coded with secret information and from which the coded information can be derived}).

*Claim Rejections - 35 USC § 103*

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claim 3, 7-9, 14 and 15 are rejected under 35 U.S.C. 103(a) as being obvious over Blonder 5,559,961 as applied to claim 1 and 11, and further in view of common practice in the art.

## 21. As to claim 3:

## a. Claim 3 claims:

- i 3. The method of claim 2, wherein said at least one cryptographic primitive is used to encrypt a message according to a one-way function.
- b. Due to the problem of indefiniteness presented above, the usage of the cryptographic primitive to encrypt a message recited here does not have any effect on the method of providing a security with the user. The usage of the cryptographic primitive to do encryption appears to have no combined relationship with the other steps.
- c. It would have been obvious to a person having ordinary skill in the art to realize that information of any type can be used to encrypt a message that is to be encrypted for security protection purpose.
- d. The skilled person would have been motivated to have such realization because:
  - i it is notoriously old and well known in the art that:
    - (1) information used for encrypting a message can be of any type as desired by a designer of the encryption device;
    - (2) information used for encrypting a message can even be generated by a random number generator.

## 22. As to claims 7 and 8:

## a. Claim 7 claims:

- i 7. The method of claim 6, wherein said recognizing said image comprises:
  - (1) training the user on a plurality of trained images, and
  - (2) testing the user on a combination of a trained image with at least one distractor image.

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- ii 8. The method of claim 7, wherein said at least one distractor image comprises a plurality of distractor images.
  - b. In these claim, the applicant has attempt to claim a typical multiple choice test method.
  - c. Multiple choice test questions used to test an individual who have been trained to recognize (or have the intelligent to recognize) certain images is notoriously old and well known in the art of image recognition and human psychophysics and cognitive psychology – (see Applicant's specification for mentioning of recognizing of learned/trained image in page 2, lines 15-24).
  - d. It would have been obvious to a person having ordinary skill in the art to use multiple choices test to test whether a person could recognize image(s) that he/she has not seen among images that he/she has seen.
  - e. The skilled person would have been motivated to do such testing for recognition ability because it is a common practice in the art to test a person with multiple choice questions.
23. As to claim 9:
- a. Blonder teaches that in his method, said testing comprises:
  - b. selecting – (see “selected locations” in step 214)
    - i a plurality of different trained images – (presented at different tap regions in an overall image such as that shown in Figure 4 and Figure 5)
    - ii by the user
    - iii in sequence – (for example, in Figure 4, region 1 {image of ears} region 2, (image of neck), region 3 (image of nose),
      - (1) said sequence providing
        - (a) said cryptographic primitive -- (graphical portion/section code with secret information)
        - (i) for determining said at least one of authorizing, identifying or authenticating the user.
24. As to claim 14:
- a. Claim 14 claims:
    - i 14. The method of claim 12, wherein said input comprises at least one pseudo-word and said sensory mechanism is verbal .
  - b. The limitations presented in this claim is an alternative to those presented in claim 13, this is an obvious substitution of one over another.
  - c. It would have been obvious to use such verbal sensory mechanism for memorizing to material that is to be imprinted in a person's memory.
  - d. The skilled person would have been motivated to use such way to imprint the material to be remembered because:
    - i using verbal sensory mechanism so as to repeat certain word/pseudo-word/pseudo-random-number/phrase so as to remember it is a common practice in the art of biological memorization.
25. As to claim 15:
- a. Claim 15. The method of claim 12, wherein said sensory mechanism is selected from the group consisting of tactile, olfactory, audible and taste – (it is understood Blonder inherently teaches that his user learn/memorized the image portions by a biological visual sensor since Blonder's material to be remembered is of image type.
  - b. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use any sensory mechanism to enable to person to remember a material/information that is to be remembered



26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ly V. Hua whose telephone number is 571-272-3853. The examiner can normally be reached on Monday to Friday from 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu Kim, can be reached on 571-272-5859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

28. The applicant is hereby notified that:

- a. The new phone number for TC 2100 receptionist is (571) 272-2100.



Ly V. Hua  
Primary Examiner  
Art Unit 2135

Lvh

December 6, 2004